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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,661	06/27/2003	Imtiaz Zafar	DP-309088	8053
22851	7590	11/16/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			A, MINH D	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			2821	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/607,661	ZAFAR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Minh D A	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/16/05</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-16 are rejected under 35 U.S.C. 102(b) as being unpatentable by Nguyen et al (US 2002/0008667).

Regarding claim 1, Nguyen discloses a communication satellite and terrestrial antenna comprising: at least one first antenna (88) located about a first portion of a mobile structure that is capable of receiving satellite and terrestrial re-transmitted satellite signals; and at least one second antenna (90) located about a second portion of the mobile structure that is capable of receiving satellite and terrestrial re-transmitted satellite signals, wherein the at least one first (88) and second antenna (90) receives the satellite and terrestrial re-transmitted satellite signals, such that signal reception on the mobile structure is combining the satellite and terrestrial re-transmitted satellite signals received by the at least one first (88) and second antennas (90) when the satellite and terrestrial re-transmitted satellite signals being received by the at least one first (88) or second antenna (90) is obstructed. See figures 3-8, col.3, lines 42-67 to col.9, lines 1-36.

Regarding claims 3-6, Nguyen discloses the at least one first and second antenna are located within the mobile structure and wherein the at least one first and

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second antenna are located exteriorly on the mobile structure and wherein the at least one first and second antenna are located within the mobile structure and exteriorly on the mobile structure and wherein the mobile structure is an automotive vehicle. See figures 3.

Regarding claims 7-14, Nguyen discloses that, the first and second portions are opposing located on a front end of the mobile structure and a rear end of the mobile structure or wherein the at least one first and second antenna are located on front end interior glass or rear end interior glass or wherein the at least one first and second antenna are located on front end exterior glass or rear end exterior glass and the glass is automotive wind-shield glass or wherein the at least one first and second antenna are located on front end interior panel or rear end interior panel or wherein the front end interior panel is an automotive dashboard or instrument panel and the rear end interior panel is an automotive rear deck panel or wherein the at least one first and second antenna are located on front end exterior panel or rear end exterior panel or wherein the front end exterior panel is an automotive front fender or glass frame and the rear end exterior panel is an automotive rear fender or glass frame. See figure 3, col.1, lines [0010] to line [0011].

Regarding claim 15, Nguyen discloses wherein the at least one first and second antenna includes a circuit board, substrate, low noise amplifier, a ground plane, and a conductive area. See figures 1-4.

Regarding claim 16, Nguyen discloses wherein the conductive area is a patch of material that defines a patch antenna. See figures 1-4.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Nguyen et al (US 2002/0008667) in view of Petros (US 6, 483,471).

Regarding claims 17-19, Nguen discloses that, the antenna is conductive, however, Nguyen does not disclose the conductive area is a patch of material that defines a patch antenna and low noise amplifier to define a coupled loop antenna and the loop material is helically wound to define a quadrifilar antenna.

Petros discloses that, the conductive area is a patch of material that defines a patch antenna and low noise amplifier to define a coupled loop antenna and the loop material is helically wound to define a quadrifilar antenna. See figures 3a-4, col.3, lines 32-67 to col.4, lines 1-60.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the conductive area is a patch of material that defines a patch antenna and low noise amplifier to define a coupled loop antenna and the loop material is helically wound to define a quadrifilar antenna such as suggest by Petros in glass mountable antenna system of Nguyen in order to provide a loop antenna and

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quadrifilar antenna for good satellite reception and avoiding the detriments of coupling and interference between antennas.

***Response to Arguments***

5. Applicant's arguments filed 9/7/05 have been fully considered but they are not persuasive.

Regarding claim 1, applicant's amendment and argument that, two antennas located different locations on the mobile structure and both antennas are designed to receive signals in the same predetermined frequency band, since these limitations are obvious skill in the art for recitation intended use of the claimed invention and the prior art structure is capable of performing the intended use, it meets the claims.

***Allowable Subject Matter***

6. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art does not teach that, the satellite and terrestrial re-transmitted satellite signals are SDARS frequencies ranging between 2320-2345 MHZ.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lindenmeier al (US 2003/0164802 A1) and Lindenmeier et al. (US 6,633,258) are cited to show a diversity system for receiving digital terrestrial and satellite radio signals for motor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Examiner

Minh A

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11/10/05

*Shih-Chao Chen* 11/14/05  
SHIH-CHAO CHEN  
PRIMARY EXAMINER